

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-140664

(43)Date of publication of application : 16.05.2003

(51)Int.Cl. G10K 15/02

G06F 17/30

G10L 15/00

G11B 20/10

G11B 27/00

G11B 27/10

H04N 7/18

(21)Application number : 2001-341561 (71)Applicant : FUJITSU TEN LTD

(22)Date of filing : 07.11.2001 (72)Inventor : KODERA HIROYUKI
NAGOSHI TOSHIMITSU

(54) AUDIO REPRODUCING DEVICE AND INFORMATION PROVIDING DEVICE, AND
AUDIO REPRODUCING PROGRAM AND INFORMATION REPRODUCING PROGRAM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an audio reproducing device which can automatically select and reproduce a musical sound matching a user's preference according to a situation.

SOLUTION: In a recording part (103), a candidate table in which indexes and keywords are made to correspond to each other and a table for retrieval are recorded. To reproduce music of a CD (130) where musical sound data of pieces of music are

recorded, a CPU (101) obtains music specification information specifying the music being reproduced from the CD (130), determines an index by using the signal from an A/D conversion part (111), obtains the keyword corresponding to the determined index from the candidate table, records the obtained keyword, music specification information, and importance in the table for retrieval so that they correspond to one another, and decrease the importance corresponding to the music specification information when the reproduction of the music being reproduced is quit by operating an operation part (104).

LEGAL STATUS [Date of request for examination] 05.11.2004

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

*** NOTICES ***

JPO and NCIP are not responsible for any damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.*** shows the word which can not be translated.

3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] It is the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is constituted including a data-processing means, a record means, an

actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means acquires the music specific information which specifies said music under playback from said record medium. Determine an index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. Make this acquired keyword, said music specific information, and significance correspond, and it records on said table for retrieval. The voice regenerative apparatus characterized by being what decreases said significance corresponding to said music specific information when playback of the music under said playback is stopped by operating said actuation means.

[Claim 2] The voice regenerative apparatus according to claim 1 characterized by for said record medium being Music CD and said music specific information being what contains a media catalog number and a track number at least.

[Claim 3] It is the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. During playback of said music, said data-processing means attaches the music specific information corresponding to this music, and records the music data of this music on said record means. Determine an index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. Make this acquired keyword, said music specific information, and significance correspond, and it records on said table for retrieval. The voice regenerative apparatus characterized by being what decreases said significance corresponding to said music specific information when playback of the music under said playback is stopped by operating said actuation means.

[Claim 4] It is the voice regenerative apparatus which acquires the music data of music from the server connected to the computer network through pocket mold telephone. It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means said music data acquired from said server Attach music specific information, record on said record means, and an index is determined using the signal from said signal input means. The voice regenerative apparatus which acquires the keyword corresponding to this determined index from said candidate table, and is characterized by being what this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval.

[Claim 5] Said data-processing means uses the music data recorded on said record means. While reproducing music Determine said index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. Make the music specific information and significance of music under this acquired keyword and said playback correspond, and it records on said table for retrieval. The voice regenerative apparatus according to claim 4 characterized by being what decreases said significance corresponding to said music specific information when playback of the music under said playback is stopped by operating said actuation means.

[Claim 6] said signal input means -- a time check -- a voice regenerative apparatus given in which term of claims 1-5 characterized by being a means and said indexes being days and months and time of day.

[Claim 7] A voice regenerative apparatus given in which term of claims 1-5 characterized by for said signal input means being a means to detect the travel speed of an automobile, and said index being this travel speed.

[Claim 8] A voice regenerative apparatus given in which term of claims 1-5 characterized by for said signal input means being temperature SANSa and humidity SANSa, and said index being the numeric value determined from the combination of the humidity measured by the temperature and this humidity SANSa which were measured by this thermo sensor or this temperature, and this humidity.

[Claim 9] The voice regenerative apparatus according to claim 8 with which said index is characterized by being the combination of the atmospheric pressure measured by said temperature, said humidity, and this atmospheric-pressure sensor at said signal input means, including atmospheric-pressure SANSa further.

[Claim 10] A voice regenerative apparatus given in which term of claims 1-5 characterized by for said signal input means being a weight sensor, and said index being the entrainment manpower measured by this weight sensor.

[Claim 11] The keyword which said signal input means is a photography means, and judges said operator's wakefulness when said processing unit analyzes an operator's face image photoed by this photography means and by which it is recorded on said table for retrieval is a voice regenerative apparatus given in which term of claims 1-5 characterized by being a keyword corresponding to sleepiness when it is judged that said operator has held sleepiness.

[Claim 12] A voice regenerative apparatus given in which term of claims 1-5 characterized by for said signal input means being an alphabetic character input means or a voice input means, and the keyword recorded on said table for retrieval being alphabetic data changed from the alphabetic data inputted by this alphabetic character input means, or the voice data inputted by this voice input means.

[Claim 13] A voice regenerative apparatus given in which term of claims 1-5 characterized by the keyword which it has a display means further, and said

data-processing means displays the candidate of a keyword on said display means, receives selection from said actuation means, and is recorded on said table for retrieval being said selected keyword.

[Claim 14] The voice regenerative apparatus according to claim 4 or 5 with which the keyword which said index is days and months, and said data-processing means acquires the days and months showing the sale day of music recorded on said recording apparatus from said server, acquires the keyword corresponding to these acquired days and months from said candidate table, and is recorded on said table for retrieval is characterized by being the keyword acquired from said candidate table.

[Claim 15] A voice regenerative apparatus given in which term of claims 1-5 characterized by being what it has an external record means further and said data-processing means records said table for retrieval on said external record means by.

[Claim 16] A voice regenerative apparatus given in which term of claims 1-15 characterized by acquiring the music specific information in which said data-processing means contains the keyword acquired out of said candidate table out of said table for retrieval, and reproducing the music corresponding to said music specific information.

[Claim 17] The voice regenerative apparatus according to claim 16 characterized by being what reproduces the music corresponding to this music specific information only when said data-processing means does not contain the keyword corresponding to sleepiness in the keyword corresponding to the music specific information acquired out of said table for retrieval.

[Claim 18] The voice regenerative apparatus according to claim 16 or 17 characterized by being what reproduces the music corresponding to this music specific information that chose one music specific information and was chosen in consideration of said significance from the music specific information of these plurality when said data-processing means acquires two or more music specific information out of said table for retrieval.

[Claim 19] The voice regenerative apparatus according to claim 16 or 17 characterized by being what reproduces the music corresponding to the text which displayed the text corresponding to the music specific information of these plurality on said display means, and was chosen from these text when it has a display means further and said data-processing means acquires two or more music specific information out of said table for retrieval.

[Claim 20] It is made to correspond to said keyword and priority which are recorded on said candidate table by said record means, and is further recorded on it. When said data-processing means acquires two or more music specific information out of said table for retrieval, The voice regenerative apparatus according to claim 16 or 17 which chooses one music specific information in consideration of said priority of the

keyword corresponding to the music specific information of these plurality, and is characterized by being what reproduces the music corresponding to this selected music specific information.

[Claim 21] Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. It is information offer equipment which carries out the annunciator of the map image to the destination determined using the record medium which recorded map information and destination information. It is constituted including a data-processing means, a record means, and an actuation means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means acquires the music specific information which specifies said music under playback from said record medium which recorded music data. Determine an index using the information about said determined destination, and the keyword corresponding to this determined index is acquired from said candidate table. Make this acquired keyword, said music specific information, and significance correspond, and it records on said table for retrieval. Information offer equipment characterized by being what decreases said significance corresponding to said music specific information when playback of the music under said playback is stopped by operating said actuation means.

[Claim 22] Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. It is information offer equipment which displays a map image using the record medium which recorded map information, and is constituted including a data-processing means, a record means, an actuation means, and a positioning means. For said record means The candidate table and the table for retrieval to which map block specific information and a keyword were made to correspond are recorded. Said data-processing means acquires the music specific information which specifies said music under playback from said record medium. Acquire positional information from said positioning means, and said map block specific information corresponding to this positional information is determined. The keyword corresponding to this determined map block specific information is acquired from said candidate table. Make this acquired keyword, said music specific information, and significance correspond, and it records on said table for retrieval. Information offer equipment characterized by being what decreases said significance corresponding to said music specific information when playback of the music under said playback is stopped by operating said actuation means.

[Claim 23] Information offer equipment according to claim 21 or 22 characterized by acquiring the music specific information in which said data-processing means contains the keyword acquired out of said candidate table out of said table for retrieval, and reproducing the music corresponding to said music specific information.

[Claim 24] Information offer equipment according to claim 23 characterized by being

what reproduces the music corresponding to this music specific information only when said data-processing means does not contain the keyword corresponding to sleepiness in the keyword corresponding to the music specific information acquired out of said table for retrieval.

[Claim 25] Information offer equipment according to claim 23 or 24 characterized by being what reproduces the music corresponding to this music specific information that chose one music specific information and was chosen in consideration of said significance from the music specific information of these plurality when said data-processing means acquires two or more music specific information out of said table for retrieval.

[Claim 26] Information offer equipment according to claim 23 or 24 characterized by being what reproduces the music corresponding to the text which displayed the text corresponding to the music specific information of these plurality on said display means, and was chosen from these text when it has a display means further and said data-processing means acquires two or more music specific information out of said table for retrieval.

[Claim 27] It is made to correspond to said keyword and priority which are recorded on said candidate table by said record means, and is further recorded on it. When said data-processing means acquires two or more music specific information out of said table for retrieval, Information offer equipment according to claim 23 or 24 which chooses one music specific information in consideration of said priority of the keyword corresponding to the music specific information of these plurality, and is characterized by being what reproduces the music corresponding to this selected music specific information.

[Claim 28] It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music The function which acquires the music specific information which specifies the music under playback from said record medium, The keyword corresponding to this index that determines an index using the signal from said signal input means and that was functioned and determined The function which this keyword that is acquired from said candidate table, and that was functioned and acquired, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, The voice playback program for realizing the function to decrease said significance corresponding to said music specific information, when playback of the music under said playback is stopped by operating said actuation means.

[Claim 29] It is constituted including a data-processing means, a record means, an

actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music The function which attaches the music specific information corresponding to this music, and records the music data of this music on said record medium during playback of said music, The keyword corresponding to this index that determines an index using the signal from said signal input means and that was functioned and determined The function which this keyword that is acquired from said candidate table, and that was functioned and acquired, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, The voice playback program for realizing the function to decrease said significance corresponding to said music specific information, when playback of the music under said playback is stopped by operating said actuation means.

[Claim 30] It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires the music data of music from the server connected to the computer network through pocket mold telephone The function which attaches music specific information and records said music data acquired from said server on said record medium, The function which acquires the keyword corresponding to this index that determines an index using the signal from said signal input means, and that was functioned and determined out of said candidate table, The voice playback program for realizing the function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval.

[Claim 31] The function to determine an index using the signal from said signal input means using the music data recorded on said record means while reproducing music, The function which acquires the keyword corresponding to this determined index from said candidate table, The function which said music specific information and said significance of music under this acquired keyword and said playback are made to correspond, and is recorded on said table for retrieval, The voice playback program according to claim 30 for realizing the function to decrease said significance corresponding to said music specific information, when playback of the music under said playback is stopped by operating said actuation means.

[Claim 32] A voice playback program given in which term of claims 28-31 for realizing further the function which reproduces the music corresponding to this music specific information that acquires the music specific information containing the keyword acquired out of said candidate table from said table for retrieval, and that was functioned and acquired.

[Claim 33] The voice playback program according to claim 32 for realizing further the function which reproduces the music corresponding to this music specific information, only when the keyword showing sleepiness is not included in the keyword corresponding to the music specific information acquired from said table for retrieval.

[Claim 34] The voice playback program according to claim 32 or 33 for realizing further the function which reproduces the music corresponding to this music specific information that chooses one music specific information in consideration of said significance, and that was functioned and chosen out of the music specific information of these plurality, when said two or more music specific information is acquired from said table for retrieval.

[Claim 35] Furthermore, the voice playback program according to claim 32 or 33 for realizing further the function which displays the text corresponding to the music specific information of these plurality on said display means, and the function which reproduces the music corresponding to the text chosen from these text, when said two or more music specific information is acquired out of said table for retrieval by said voice regenerative apparatus equipped with the display means.

[Claim 36] To furthermore, said voice regenerative apparatus which is made to correspond to said keyword and priority which are recorded on said candidate table by said record means, and is recorded on it The function which chooses one music specific information in consideration of said priority of the keyword corresponding to the music specific information of these plurality when said two or more music specific information is acquired from said table for retrieval, The voice playback program according to claim 32 or 33 for realizing further the function which reproduces the music corresponding to this selected music specific information.

[Claim 37] It is constituted including a data-processing means, a record means, and an actuation means, and the candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. To the information offer equipment which carries out an annunciator, the map image to the destination determined using the record medium which recorded map information and destination information The function which acquires the music specific information which specifies said music under playback from said record medium which recorded music data, The function to determine an index using the information about said determined destination, The function which acquires the keyword corresponding to this determined index from said candidate table, The function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, The information distribution program for realizing the function to decrease said significance corresponding to said music specific information, when playback of the music under said playback is stopped by operating said actuation means.

[Claim 38] It is constituted including a data-processing means, a record means, an actuation means, and a positioning means. The candidate table and the table for retrieval to which map block specific information and a keyword were made to correspond are recorded on said record means. Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. To the information offer equipment which displays a map image using the record medium which recorded map information The function which acquires the music specific information which specifies said music under playback from said record medium, The function which acquires positional information from said positioning means, the function to determine said map block specific information corresponding to this positional information, The function which acquires the keyword corresponding to this determined map block specific information from said candidate table, The function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, The information distribution program for realizing the function to decrease said significance corresponding to said music specific information, when playback of the music under said playback is stopped by operating said actuation means.

[Claim 39] The information distribution program according to claim 37 or 38 for realizing further the function which reproduces the music corresponding to this music specific information that acquires the music specific information containing the keyword acquired out of said candidate table from said table for retrieval, and that was functioned and acquired.

[Claim 40] The information distribution program according to claim 39 for realizing further the function which reproduces the music corresponding to this music specific information, only when the keyword showing sleepiness is not included in the keyword corresponding to the music specific information acquired from said table for retrieval.

[Claim 41] The information distribution program according to claim 39 or 40 for realizing further the function which reproduces the music corresponding to this music specific information that chooses one music specific information in consideration of said significance, and that was functioned and chosen out of the music specific information of these plurality, when said two or more music specific information is acquired from said table for retrieval.

[Claim 42] Furthermore, the information distribution program according to claim 39 or 40 for realizing further the function which displays the text corresponding to the music specific information of these plurality on said display means, and the function which reproduces the music corresponding to the text chosen from these text, when said two or more music specific information is acquired out of said table for retrieval by said information offer equipment equipped with the display means.

[Claim 43] To furthermore, said information offer equipment which is made to correspond to said keyword and priority which are recorded on said candidate table by

said record means, and is recorded on it. The function which chooses one music specific information in consideration of said priority of the keyword corresponding to the music specific information of these plurality when said two or more music specific information is acquired from said table for retrieval, The information distribution program according to claim 39 or 40 for realizing further the function which reproduces the music corresponding to this selected music specific information.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the voice regenerative apparatus which determines the music reproduced using the keyword especially given to music about the voice regenerative apparatus which reproduces the appointed music, information offer equipment and the voice playback program, and the information distribution program from record media, such as a compact disk with which music was recorded, information offer equipment and a voice playback program, and an information distribution program.

[0002]

[Description of the Prior Art] It is general to operate various kinds of audio equipments being installed in the automobile, and listening to music. As a musical record medium, the compact disk (it is described as "CD" below) and the mini disc (it is described as "MD" below) have spread, and these regenerative apparatus are also carried in the automobile. In order to reduce the troublesomeness of CD exchange, CD of about ten sheets is simultaneously set in CD regenerative apparatus carried in an automobile, and there is also a regenerative apparatus which has exchangeable autochanger ability automatically among them about CD for playback.

[0003] Moreover, the map data recorded on CD-ROM or the digital video disc (it is described as "DVD" below) and the current position of the automobile calculated using the GPS (Global Positioning System) signal are displayed on a small liquid crystal panel, and the car navigation equipment which shows an operator to the path to the destination is also increasingly carried in an automobile.

[0004] Furthermore, the car navigation equipment which carried the hard disk drive which is a recording apparatus for computers is also used. If this car navigation equipment is equipped also with the playback means of CD and musical playback is started, it can compress the music under playback with predetermined digital data compression technology automatically, can record it on a hard disk, and can create a music library. At this time, acquire the information applicable to the music recorded on

a hard disk from the information (an album name, an artist name, music name, etc.) about CD of marketing currently beforehand recorded on the hard disk, and it is made to correspond with sound data, and records on a hard disk. Furthermore, about the music by which information is not recorded on a hard disk, a cellular phone is used, a predetermined server's database connected to the Internet is accessed, and required information is acquired.

[0005] Such additional information is used when a user chooses desired music from two or more music recorded on the hard disk. For example, it is classified an artist exception, according to a genre, etc., and is displayed on a small liquid crystal panel, and song selection of a user is made easy.

[0006] The technique of determining music is indicated by determining predetermined additional information for every music beforehand, making them correspond in JP,1-217783,A, JP,6-110478,A, JP,9-146572,A, etc. on the other hand, recording on record media, such as CD, specifying a keyword and searching additional information, when choosing the music to reproduce. As additional information, the language and the name of a person showing the ambient atmosphere of music, the name of a place, the season, an event and an event, the age, etc. are mentioned. The data-logging format is standardized, respectively, the usable field is freely prepared for the maker, and CD, MD, DVD, etc. can record additional information on the part. For example, in the case of CD, it is possible to record additional information on some fields of TOC (Table of Contents) which records a hour entry etc. Moreover, it is also possible to record on another recording devices, such as semiconductor memory, without recording additional information on the record medium which recorded sound data.

[0007] the media catalog number (it is described as "MCN" below) which information other than sound data is generally also recorded on CD, and becomes a TOC part from the 13-digit number for identifying CD uniquely, the track number of each music, a hour entry, etc. -- record -- now, it is. Among the digital data by which reading appearance was carried out from CD, after being decoded, sound data are changed into an analog signal and reproduced as voice. On the other hand, the track number of TOC information etc. is changed into an alphabetic character, and what is displayed on a liquid crystal panel is performed.

[0008]

[Problem(s) to be Solved by the Invention] a sound -- as described above, by the retrieval which uses the information beforehand added fixed for every music, the music suitable for liking of a user may not necessarily be chosen from no there being, if the impression which a user holds to easy music is not necessarily the same

[0009] Moreover, even if it depends the music which a user wants to listen to like [it always is not the same and] the environment of the perimeter when hearing it, and an activity eye of an automobile, it differs. For example, the music to wish may change with perimeter environments, such as time zones, such as the weathers, such as ****,

and day and night, and atmospheric temperature. Moreover, even if it depends a drive with a family, the drive by husband and wife, the drive by strep and Chloe, the drive by one person, etc. like an activity eye of an automobile, the music which wishes to reproduce, respectively may differ. However, the music which a user wishes according to those situations was conventionally unreproducible.

[0010] Moreover, although that playback of music which invites sleepiness is not desirable etc. had music with unsuitable reproducing according to an operation situation since there was a danger of causing an operator a dozing off while driving, it was not able to prevent from reproducing it appropriately in operation of a midnight highway.

[0011] According to the environment of a perimeter in case music is reproduced, a user's situation, time, etc., can add retrieval information to music automatically to two or more music that this invention should solve the above-mentioned technical problem, and the added retrieval information is used. It aims at offering the voice regenerative apparatus which can reproduce the music suitable for a surrounding environment, a user's feelings, time, etc., information offer equipment and a voice playback program, and an information distribution program.

[0012]

[The means for solving a technical problem and its effectiveness] The object of this invention is attained by the following means.

[0013] The voice regenerative apparatus (1) concerning this invention is a voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means acquires the music specific information which specifies said music under playback from said record medium. Determine an index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. This acquired keyword, said music specific information, and significance are made to correspond, and it records on said table for retrieval, and when playback of the music under said playback is stopped by operating said actuation means, it is characterized by being what decreases said significance corresponding to said music specific information.

[0014] Moreover, in the above-mentioned voice regenerative apparatus (1), as for the voice regenerative apparatus (2) concerning this invention, said record medium is characterized by being that in which it is Music CD and said music specific information contains a media catalog number and a track number at least.

[0015] According to the above-mentioned voice regenerative apparatus (1) or (2), a signal is embraced from a signal input means. By being able to determine a keyword

automatically to the music under playback, being able to record the response relation between music and a keyword, and reducing significance, when the music which a user is reproducing is made to skip further. It can be used as a scale which expects that a user listens to music for significance. Therefore, it becomes possible to determine the music which a user wishes according to a situation by using them, when a keyword and significance determine the music to reproduce.

[0016] Moreover, the voice regenerative apparatus (3) concerning this invention is a voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. During playback of said music, said data-processing means attaches the music specific information corresponding to this music, and records the music data of this music on said record means. Determine an index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. This acquired keyword, said music specific information, and significance are made to correspond, and it records on said table for retrieval, and when playback of the music under said playback is stopped by operating said actuation means, it is characterized by being what decreases said significance corresponding to said music specific information. According to the above-mentioned voice regenerative apparatus (3), the above-mentioned voice regenerative apparatus (1) or the same effectiveness as (2) can be done so, and it becomes possible to create further the music library which can specify music as accuracy.

[0017] Moreover, the voice regenerative apparatus (4) concerning this invention is a voice regenerative apparatus which acquires the music data of music from the server connected to the computer network through pocket mold telephone. It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means said music data acquired from said server Attach music specific information, record on said record means, and an index is determined using the signal from said signal input means. The keyword corresponding to this determined index is acquired from said candidate table, and it is characterized by being what this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval. According to the above-mentioned voice regenerative apparatus (4), according to the signal from a signal input means, a keyword can be automatically determined to the music under playback, the response relation between music and a keyword can be recorded, and it becomes possible to create the music library which can specify music as accuracy.

[0018] Moreover, the voice regenerative apparatus (5) concerning this invention is set to the above-mentioned voice regenerative apparatus (4). Said data-processing means uses the music data recorded on said record means. While reproducing music Determine said index using the signal from said signal input means, and the keyword corresponding to this determined index is acquired from said candidate table. Make the music specific information and significance of music under this acquired keyword and said playback correspond, and it records on said table for retrieval. When playback of the music under said playback is stopped by operating said actuation means, it is characterized by being what decreases said significance corresponding to said music specific information. According to the above-mentioned voice regenerative apparatus (5), the same effectiveness as the above-mentioned voice regenerative apparatus (3) can be done so.

[0019] moreover, the voice regenerative apparatus (6) concerning this invention -- or [any of above-mentioned voice regenerative-apparatus (1) - (5)] -- setting -- said signal input means -- a time check -- it is a means and said index is characterized by being days and months and time of day. According to the above-mentioned voice regenerative apparatus (6), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, days and months and time of day can be used as a keyword, and it becomes possible to determine the music to reproduce automatically according to an annual event, a memorial day, a season, a time zone, etc.

[0020] Moreover, the voice regenerative apparatus (7) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], said signal input means is a means to detect the travel speed of an automobile, and said index is characterized by being this travel speed. According to the above-mentioned voice regenerative apparatus (7), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, the travel speed of an automobile can be used as a keyword and it becomes possible to determine the music to reproduce automatically according to the run state under delay and high-speed transit etc.

[0021] Moreover, the voice regenerative apparatus (8) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], said signal input means are temperature SANSa and humidity SANSa, and said index is characterized by being the numeric value determined from the combination of the humidity measured by the temperature and this humidity SANSa which were measured by this thermo sensor or this temperature, and this humidity. According to the above-mentioned voice regenerative apparatus (8), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, the value calculated from temperature and humidity, such as combination of temperature and humidity or the discomfort index, can be used as a

keyword, and it becomes possible to determine the music to reproduce automatically according to temperature, humidity, the discomfort index, etc.

[0022] Moreover, the voice regenerative apparatus (9) concerning this invention is characterized by said index being the combination of the atmospheric pressure measured by said temperature, said humidity, and this atmospheric-pressure sensor in the above-mentioned voice regenerative apparatus (8) at said signal input means, including atmospheric-pressure SANSAs further. According to the above-mentioned voice regenerative apparatus (9), the same effectiveness as the above-mentioned voice regenerative apparatus (8) can be done so. Furthermore, the combination of temperature, humidity, and an atmospheric pressure can be used as a keyword, and it becomes possible to determine the music to reproduce automatically according to the weathers, such as ****.

[0023] Moreover, the voice regenerative apparatus (10) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], said signal input means is a weight sensor, and said index is characterized by being the entrainment manpower measured by this weight sensor. According to the above-mentioned voice regenerative apparatus (10), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, entrainment manpower can be used as a keyword and a drive with a family, the drive by husband and wife, the drive by step and Chloe, the drive by one person, etc. become possible [determining automatically the music which responds like an activity eye of an automobile and is reproduced].

[0024] Moreover, the voice regenerative apparatus (11) concerning this invention The above-mentioned voice regenerative apparatus (1) It sets they to be [any of - (5)]. Said signal input means Are a photography means, and when said processing unit analyzes an operator's face image photoed by this photography means, said operator's wakefulness is judged. The keyword recorded on said table for retrieval is characterized by being a keyword corresponding to sleepiness, when it is judged that said operator has held sleepiness. According to the above-mentioned voice regenerative apparatus (11), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, information that an operator holds sleepiness to music can be added, and when determining the music to reproduce automatically, it can avoid determining the music which holds sleepiness.

[0025] Moreover, the voice regenerative apparatus (12) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], said signal input means is an alphabetic character input means or a voice-input means, and the keyword recorded on said table for retrieval is characterized by to be alphabetic data changed from the alphabetic data inputted by this alphabetic character input means, or the voice data inputted by this voice input means. According to the

above-mentioned voice regenerative apparatus (12), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, a user can set up the alphabetic character of arbitration as a keyword. [0026] Moreover, the voice regenerative apparatus (13) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], it has a display means further, said data-processing means displays the candidate of a keyword on said display means, selection from said actuation means is received, and the keyword recorded on said table for retrieval is characterized by being said selected keyword. According to the above-mentioned voice regenerative apparatus (13), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, a user can set up a keyword easily.

[0027] Moreover, the voice regenerative apparatus (14) concerning this invention In the above-mentioned voice regenerative apparatus (4) or (5), said index is days and months. Said data-processing means acquires the days and months showing the sale day of music recorded on said recording apparatus from said server. The keyword corresponding to these acquired days and months is acquired from said candidate table, and it is characterized by the keyword recorded on said table for retrieval being a keyword acquired from said candidate table. According to the above-mentioned voice regenerative apparatus (14), the above-mentioned voice regenerative apparatus (4) or the same effectiveness as (5) can be done so. Furthermore, the keyword relevant to the sale day of music can be set up.

[0028] Moreover, the voice regenerative apparatus (15) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (5)], it has an external record means further, and said data-processing means is characterized by being what records said table for retrieval on said external record means. According to the above-mentioned voice regenerative apparatus (15), the same effectiveness as any of above-mentioned voice regenerative-apparatus (1) - (5) they are can be done so. Furthermore, even if it is the case where the same automobile is used by using a different external record means for every user, it becomes possible to determine automatically the music responded and reproduced for every operator.

[0029] Moreover, the voice regenerative apparatus (16) concerning this invention is set they to be [any of above-mentioned voice regenerative-apparatus (1) - (15)], acquires the music specific information in which said data-processing means contains the keyword acquired out of said candidate table out of said table for retrieval, and is characterized by reproducing the music corresponding to said music specific information. According to the above-mentioned voice regenerative apparatus (16), the music according to a situation can be determined automatically and it can reproduce.

[0030] Moreover, in the above-mentioned voice regenerative apparatus (16), the

voice regenerative apparatus (17) concerning this invention is characterized by being what reproduces the music corresponding to this music specific information, only when said data-processing means does not contain the keyword corresponding to sleepiness in the keyword corresponding to the music specific information acquired out of said table for retrieval. According to the above-mentioned voice regenerative apparatus (17), playback of the music which makes a user hold sleepiness is avoidable. [0031] Moreover, in the above-mentioned voice regenerative apparatus (16) or (17), the voice regenerative apparatus (18) concerning this invention is characterized by being what reproduces the music corresponding to this music specific information that chose one music specific information and was chosen in consideration of said significance from the music specific information of these plurality, when said data-processing means acquires two or more music specific information out of said table for retrieval.

[0032] Moreover, the voice regenerative apparatus (19) concerning this invention In the above-mentioned voice regenerative apparatus (16) or (17), it has a display means further. When said data-processing means acquires two or more music specific information out of said table for retrieval, the text corresponding to the music specific information of these plurality is displayed on said display means, and it is characterized by being what reproduces the music corresponding to the text chosen from these text.

[0033] Moreover, the voice regenerative apparatus (20) concerning this invention In the above-mentioned voice regenerative apparatus (16) or (17) for said record means It is made to correspond to said keyword and priority which are recorded on said candidate table, and is recorded further. When said data-processing means acquires two or more music specific information out of said table for retrieval, One music specific information is chosen in consideration of said priority of the keyword corresponding to the music specific information of these plurality, and it is characterized by being what reproduces the music corresponding to this selected music specific information.

[0034] The above-mentioned voice regenerative apparatus (16) According to - (20), out of two or more music searched using the keyword, one music can be chosen and it can reproduce.

[0035] Moreover, the information offer equipment (1) concerning this invention acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is information offer equipment which carries out the annunciator of the map image to the destination determined using the record medium which recorded map information and destination information. It is constituted including a data-processing means, a record means, and an actuation means. For said record means The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded. Said data-processing means

acquires the music specific information which specifies said music under playback from said record medium which recorded music data. Determine an index using the information about said determined destination, and the keyword corresponding to this determined index is acquired from said candidate table. This acquired keyword, said music specific information, and significance are made to correspond, and it records on said table for retrieval, and when playback of the music under said playback is stopped by operating said actuation means, it is characterized by being what decreases said significance corresponding to said music specific information. According to the above-mentioned information offer equipment (1), music can be made to correspond to the information relevant to destinations, such as a skiing area and a campsite, and it becomes possible to determine automatically the music reproduced according to the destination.

[0036] Moreover, the information offer equipment (2) concerning this invention acquires information from the record medium which recorded the music data of two or more music, and reproduces music. It is information offer equipment which displays a map image using the record medium which recorded map information, and is constituted including a data-processing means, a record means, an actuation means, and a positioning means. For said record means The candidate table and the table for retrieval to which map block specific information and a keyword were made to correspond are recorded. Said data-processing means acquires the music specific information which specifies said music under playback from said record medium. Acquire positional information from said positioning means, and said map block specific information corresponding to this positional information is determined. The keyword corresponding to this determined map block specific information is acquired from said candidate table. This acquired keyword, said music specific information, and significance are made to correspond, and it records on said table for retrieval, and when playback of the music under said playback is stopped by operating said actuation means, it is characterized by being what decreases said significance corresponding to said music specific information. According to the above-mentioned information offer equipment (2), music can be made to correspond to specific areas, such as the sea and a crest, and it becomes possible to determine the music to reproduce automatically according to the area under transit of an automobile.

[0037] Moreover, in the above-mentioned information offer equipment (1) or (2), the information offer equipment (3) concerning this invention acquires the music specific information in which said data-processing means contains the keyword acquired out of said candidate table out of said table for retrieval, and is characterized by reproducing the music corresponding to said music specific information. According to the above-mentioned information offer equipment (3), the music according to a situation can be determined automatically and it can reproduce.

[0038] Moreover, in the above-mentioned information offer equipment (3), the

information offer equipment (4) concerning this invention is characterized by being what reproduces the music corresponding to this music specific information, only when said data-processing means does not contain the keyword corresponding to sleepiness in the keyword corresponding to the music specific information acquired out of said table for retrieval. According to the above-mentioned information offer equipment (4), playback of the music which makes a user hold sleepiness is avoidable. [0039] Moreover, in the above-mentioned information offer equipment (3), or (4), the information offer equipment (5) concerning this invention is characterized by to be what reproduces the music corresponding to this music specific information that chose one music specific information and was chosen in consideration of said significance from the music specific information of these plurality, when said data-processing means acquires two or more music specific information out of said table for retrieval.

[0040] Moreover, the information offer equipment (6) concerning this invention is set to the above-mentioned information offer equipment (3) or (4). When it had the display means further and said data-processing means acquires two or more music specific information out of said table for retrieval, The text corresponding to the music specific information of these plurality is displayed on said display means, and it is characterized by being what reproduces the music corresponding to the text chosen from these text.

[0041] The information offer equipment (7) concerning this invention is set to the above-mentioned information offer equipment (3) or (4). Moreover, for said record means It is made to correspond to said keyword and priority which are recorded on said candidate table, and is recorded further. When said data-processing means acquires two or more music specific information out of said table for retrieval, One music specific information is chosen in consideration of said priority of the keyword corresponding to the music specific information of these plurality, and it is characterized by being what reproduces the music corresponding to this selected music specific information.

[0042] The above-mentioned information offer equipment (5) According to - (7), out of two or more music searched using the keyword, one music can be chosen and it can reproduce.

[0043] Moreover, the voice playback program (1) concerning this invention It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music The function which acquires the music specific information which specifies the music under playback from said record medium, The keyword corresponding to this index

that determines an index using the signal from said signal input means and that was functioned and determined The function which this keyword that is acquired from said candidate table, and that was functioned and acquired, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, When playback of the music under said playback is stopped by operating said actuation means, it is characterized by realizing the function to decrease said significance corresponding to said music specific information. According to the above-mentioned voice playback program (1), the same effectiveness as the above-mentioned voice regenerative apparatus (1) can be done so.

[0044] Moreover, the voice playback program (2) concerning this invention It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires information from the record medium which recorded the music data of two or more music, and reproduces music The function which attaches the music specific information corresponding to this music, and records the music data of this music on said record medium during playback of said music, The keyword corresponding to this index that determines an index using the signal from said signal input means and that was functioned and determined The function which this keyword that is acquired from said candidate table, and that was functioned and acquired, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, When playback of the music under said playback is stopped by operating said actuation means, it is characterized by realizing the function to decrease said significance corresponding to said music specific information.

[0045] Moreover, the voice playback program (3) concerning this invention It is constituted including a data-processing means, a record means, an actuation means, and a signal input means. The candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. To the voice regenerative apparatus which acquires the music data of music from the server connected to the computer network through pocket mold telephone The function which attaches music specific information and records said music data acquired from said server on said record medium, The function which acquires the keyword corresponding to this index that determines an index using the signal from said signal input means, and that was functioned and determined out of said candidate table, It is characterized by realizing the function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval.

[0046] Moreover, the voice playback program (4) concerning this invention The function to determine an index using the signal from said signal input means using the

music data recorded on said record means while reproducing music, The function which acquires the keyword corresponding to this determined index from said candidate table, The function which said music specific information and said significance of music under this acquired keyword and said playback are made to correspond, and is recorded on said table for retrieval, When playback of the music under said playback is stopped by operating said actuation means, it is characterized by realizing the function to decrease said significance corresponding to said music specific information.

[0047] The same effectiveness as above-mentioned voice playback program (2) above-mentioned regenerative-apparatus [which corresponds respectively according to - (4) / voice] (3) - (5) can be done so.

[0048] Moreover, the voice playback program (5) concerning this invention is characterized by to set they to be [any of above-mentioned voice playback program (1) - (4)], and to realize further the function which reproduces the music corresponding to this music specific information that acquires the music specific information containing the keyword acquired out of said candidate table from said table for retrieval, and that was functioned and acquired.

[0049] Moreover, in the above-mentioned voice playback program (5), the voice playback program (6) concerning this invention is characterized by realizing further the function which reproduces the music corresponding to this music specific information, only when the keyword showing sleepiness is not included in the keyword corresponding to the music specific information acquired from said table for retrieval.

[0050] Moreover, the voice playback program (7) concerning this invention is characterized by to realize further the function which reproduces the music corresponding to this music specific information that chooses one music specific information in consideration of said significance, and that was functioned and chosen out of the music specific information of these plurality in the above-mentioned voice playback program (5), or (6), when two or more of said music specific information is acquired from said table for retrieval.

[0051] Moreover, the voice playback program (8) concerning this invention In the above-mentioned voice playback program (5) or (6), to said information offer equipment further equipped with the display means When said two or more music specific information is acquired out of said table for retrieval, it is characterized by realizing further the function which displays the text corresponding to the music specific information of these plurality on said display means, and the function which reproduces the music corresponding to the text chosen from these text.

[0052] Moreover, the voice playback program (9) concerning this invention In the above-mentioned voice playback program (5) or (6) further for said record means To said information offer equipment which is made to correspond to said keyword and priority which are recorded on said candidate table, and is recorded The function

which chooses one music specific information in consideration of said priority of the keyword corresponding to the music specific information of these plurality when said two or more music specific information is acquired from said table for retrieval, It is characterized by realizing further the function which reproduces the music corresponding to this selected music specific information.

[0053] The same effectiveness as above-mentioned voice playback program (5) above-mentioned regenerative-apparatus [which corresponds respectively according to - (9) / voice] (16) - (20) can be done so.

[0054] Moreover, the information distribution program (1) concerning this invention It is constituted including a data-processing means, a record means, and an actuation means, and the candidate table and the table for retrieval to which the index and the keyword were made to correspond are recorded on said record means. Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. To the information offer equipment which carries out an annunciator, the map image to the destination determined using the record medium which recorded map information and destination information The function which acquires the music specific information which specifies said music under playback from said record medium which recorded music data, The function to determine an index using the information about said determined destination, The function which acquires the keyword corresponding to this determined index from said candidate table, The function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, When playback of the music under said playback is stopped by operating said actuation means, it is characterized by realizing the function to decrease said significance corresponding to said music specific information.

[0055] Moreover, the information distribution program (2) concerning this invention It is constituted including a data-processing means, a record means, an actuation means, and a positioning means. The candidate table and the table for retrieval to which map block specific information and a keyword were made to correspond are recorded on said record means. Acquire information from the record medium which recorded the music data of two or more music, and music is reproduced. To the information offer equipment which displays a map image using the record medium which recorded map information The function which acquires the music specific information which specifies said music under playback from said record medium, The function which acquires positional information from said positioning means, the function to determine said map block specific information corresponding to this positional information, The function which acquires the keyword corresponding to this determined map block specific information from said candidate table, The function which this acquired keyword, said music specific information, and significance are made to correspond, and is recorded on said table for retrieval, When playback of the music under said

playback is stopped by operating said actuation means, it is characterized by realizing the function to decrease said significance corresponding to said music specific information.

[0056] Moreover, the information distribution program (3) concerning this invention is characterized by realizing further the function which reproduces the music corresponding to this music specific information that acquires the music specific information containing the keyword acquired out of said candidate table from said table for retrieval, and that was functioned and acquired in the above-mentioned information distribution program (1) or (2).

[0057] Moreover, in the above-mentioned information distribution program (3), the information distribution program (4) concerning this invention is characterized by realizing further the function which reproduces the music corresponding to this music specific information, only when the keyword showing sleepiness is not included in the keyword corresponding to the music specific information acquired from said table for retrieval.

[0058] Moreover, in the above-mentioned information distribution program (3) or (4), the information distribution program (5) concerning this invention is characterized by to realize further the function which reproduces the music corresponding to this music specific information that chooses one music specific information in consideration of said significance, and that was functioned and chosen out of the music specific information of these plurality, when said two or more music specific information is acquired from said table for retrieval.

[0059] Moreover, the information distribution program (6) concerning this invention In the above-mentioned information distribution program (3) or (4), to said information offer equipment further equipped with the display means When said two or more music specific information is acquired out of said table for retrieval, it is characterized by realizing further the function which displays the text corresponding to the music specific information of these plurality on said display means, and the function which reproduces the music corresponding to the text chosen from these text.

[0060] Moreover, the information distribution program (7) concerning this invention In the above-mentioned information distribution program (3) or (4) further for said record means To said information offer equipment which is made to correspond to said keyword and priority which are recorded on said candidate table, and is recorded The function which chooses one music specific information in consideration of said priority of the keyword corresponding to the music specific information of these plurality when said two or more music specific information is acquired from said table for retrieval, It is characterized by realizing further the function which reproduces the music corresponding to this selected music specific information.

[0061] The same effectiveness as above-mentioned information distribution program (1) above-mentioned equipment [which corresponds respectively according to - (7) /

information offer] (1) - (7) can be done so.

[0062]

[Embodiment of the Invention] Hereafter, the gestalt of operation concerning this invention is explained based on the attached drawing.

[0063] Drawing 1 is the block diagram showing the voice regenerative apparatus concerning the gestalt of operation of the 1st of this invention. the voice regenerative apparatus 100 -- the central data-processing section (it is described as "CPU" below) 101, memory 102, the Records Department 103, a control unit 104, and a time check -- it is constituted including a means 105, the CD drive 106, the digital processing section 107, the D/A converter 108, amplifier 109, a bus 110, and the A/D-conversion section 111. The A/D-conversion section 111 is connected to the detecting element 140 which detects temperature, humidity, etc., and amplifier 109 is connected to the loudspeaker 120. The bus 110 consists of two or more signal lines, and control of each part of the circumference by the data exchange and CPU101 between each part of the voice regenerative-apparatus 100 interior is performed through a bus 110. When the power source (not shown) of the voice regenerative apparatus 100 is turned off, the data recorded on memory 102 disappear, but the data recorded on the Records Department 103 remain as it is, and when the power source of a voice regenerative apparatus is turned on next time, they can be used.

[0064] The voice regenerative apparatus 100 starts musical playback by setting CD130 with which music was recorded on the CD drive 106 as well as the conventional CD regenerative apparatus. Playback of the music currently recorded on CD is performed when CPU101 controls the CD drive 106 and the digital processing section 107. The CD drive 106 rotates CD130 and transmits digital sound data to the digital processing section 107 by the optical pickup (not shown). The digital processing section 107 decodes the digital data currently coded, generates the stereo sound data of the predetermined number of bits, and transmits them to the D/A converter 108. After stereo sound data are changed into an analog signal from a digital signal by the D/A converter 108 and are amplified with amplifier 109, it is reproduced as a sound by being transmitted to a loudspeaker 120.

[0065] A control unit 104 receives actuation of a user and transmits the signal which controls playback of CD130 to CPU101. CPU101 receives the signal from a control unit 104, and controls skipping [which is returned / which fast forwards the music under playback], suspending playback, etc.

[0066] the description of the voice regenerative apparatus 100 -- CPU101 -- a time check -- it is determining a predetermined keyword automatically, making this determined keyword and the information which specifies the music under playback correspond according to the signal from a means 105, a detecting element 140, and a control unit 104, and recording on the Records Department 103 as a table for retrieval. moreover, the case where the music to reproduce is determined -- a time check -- it

is the description to determine a keyword automatically according to a means 105, the signal from a detecting element 140, etc., to search the cable for retrieval of the Records Department 103 using this keyword, and to reproduce the agreeing music.

[0067] drawing 2 -- a time check -- in the processing which determines a keyword automatically using the signal from a means 105, it is the flow chart which showed the processing which CPU101 performs. In the following explanation, CD130 is set to the CD drive 106, and it is assumed that reading appearance of the TOC information is carried out from CD130, and it is recorded on memory 102.

[0068] In step 201, when it repeated and judges whether the music of CD130 is being reproduced and is judged as under playback, it shifts to step 202.

[0069] In step 202, it judges whether there is any information (it is described as "music specific information" below) which specifies the music under present playback as the TOC information currently recorded on memory 102. When it is judged that there is music specific information corresponding to the music under playback, the music specific information is acquired and it records on the predetermined field of memory 102, and processing is ended when it is judged that there is nothing. MCN and a track number can be used for music specific information. MCN can specify CD130, and since the track number expresses the sequence of the music currently recorded on the CD130, when exchanged in CD130, it can specify music by using MCN and a track number as a lot.

[0070] step 203 -- setting -- a time check -- the present time is acquired from a means 105 and it records on the predetermined field of memory 102.

[0071] In step 204, the information on days and months is acquired from the time of present in Japan [which was acquired in step 203], and it acquires from the "candidate table" showing the keyword which is in agreement with the acquired days and months in (a) of drawing 3 . In (a) of drawing 3 , days and months are used as an index and the language relevant to an annual event, a public holiday, a memorial day, a season, etc. is recorded as a keyword. For example, if that day is on July 7, "Tanabata" and two keywords of "summer" will be determined.

[0072] In step 205, the information on time of day is acquired from the time of present in Japan [which was acquired in step 203] like step 204, and it acquires from the candidate table showing the keyword corresponding to the time zone when the acquired time of day is contained in (b) of drawing 3 . In (b) of drawing 3 , the time zone is used as an index.

[0073] For example, if it will be current time at 19:50 on December 24, a keyword "Christmas Eve" will be determined by processing of step 204, and a keyword "the evening" will be determined by processing of step 205.

[0074] In step 206, the music specific information acquired in step 202, the keyword determined by processing of steps 204 and 205, and significance are made to correspond, and it records on "the table for retrieval" of the Records Department 103.

An example of the table for retrieval is shown in (a) of drawing 4 .

[0075] In (a) of drawing 4 , it is made to correspond to the group of the {MCN and the track number} which are music specific information, and the group of two or more {keywords and significance} is recorded. An integral value can be used for significance. In recording newly, it records "1" as a significance. Moreover, if the same music specific information is already recorded, music specific information will carry out additional record only of a keyword and the significance (= 1), without recording. Furthermore, when the same music specific information and the same keyword are recorded, only 1 makes the significance of a corresponding keyword increase.

[0076] In step 207, when it judges whether playback of the following music was started and it is judged that playback of the following music was started, after shifting to step 202, processing of steps 202-206 is repeated. When it is judged that the same music is under playback, it judges whether the signal from a control unit 104 was received. When it is judged that the signal from a control unit 104 is a signal corresponding to skip actuation of music, it shifts to step 209.

[0077] In step 209, only 1 decreases the significance of the keyword recorded in step 206.

[0078] In step 210, the existence of the directions to end is judged, and return and the above-mentioned processing are repeated to step 207 until there are termination directions.

[0079] The table for retrieval which the music specific information, the keyword, and significance which were reproduced were made to correspond, and recorded them will be generated the above result. When it becomes a value larger as there are many counts which reproduce the same music and playback is skipped by a user's intention, the significance of the table for retrieval can be used from only the count serving as a small value as a scale which expects that a user listens to each music so that it may mention later.

[0080] "Graduation" on March 12, "entrance" on April 5, "marriage" on April 17, the "birthday" on June 20, etc. are data which the user set up among the keywords of the candidate table shown in (a) of drawing 3 , and other data are set up beforehand. For example, a user can operate manual operation buttons (not shown), such as a ten key of a control unit 104, can specify the days and months of arbitration, and can enable registration of the keyword of arbitration.

[0081] Drawing 5 is the flow chart which showed the processing which CPU101 performs like drawing 2 in the processing which determines a keyword according to the travel speed of an automobile.

[0082] In step 501, a predetermined value is set to time interval Δt which detects a travel speed as initial setting, 0 is set to a loop counter n , and current time is set to T_0 .

[0083] step 502 -- setting -- current time -- a time check -- it acquires from a

means 105, and when it judges whether the time amount of Δt passed as compared with T_0 and it is judged that it passed, it shifts to step 503.

[0084] In step 503, the signal from a detecting element 140 is received through the A/D-conversion section 111, a travel speed is acquired, this acquired rate is recorded on memory 102 as a value of variable $V(n)$, and 1 is simultaneously added to Counter n .

[0085] In step 504, the time variation of $V(n)$ recorded on memory 102 is evaluated. By repeating processing of steps 502–510 so that it may mention later, rate data $V(n)$ and the (maximum number of the rate data which $n = 1 - N$, and N record) in the predetermined time amount range will be recorded on memory 102. The range of fluctuation which subtracted the minimum value from the maximum of $V(n)$ in order to evaluate the time variation of $V(n)$, and the average of $V(n)$ are calculated.

[0086] At step 505, the range of fluctuation calculated in step 504 judges whether it is predetermined within the limits. When it is judged that it is predetermined within the limits, it shifts to step 506, and when it is judged that it is not predetermined within the limits, it shifts to step 507.

[0087] In step 506, the average value calculated in step 504 is used, and a corresponding keyword is determined with reference to a candidate table. An example of a candidate table is shown in (c) of drawing 3. the case where they are a keyword "delay" and 5–20km when (c) of drawing 3 is used, and average speed is 0–5km -- "it is late" and the case of 60km or more -- a keyword -- it sets up saying "it is quick", and in being other (0–60km), it does not set up a keyword. Furthermore, the keyword determined as the music specific information under playback and significance are made to correspond like the processing in the above-mentioned step 206 (drawing 2), and it records on the table for retrieval of the Records Department 103. Processing when the same music specific information and the same keyword are already recorded on the table for retrieval is the same as that of step 206 (drawing 2).

[0088] step 507 -- setting -- a time check -- current time is acquired from a means 105 and it sets to T_0 .

[0089] In step 508, when it is judged that whether it is over the number N which records the rate which Counter n detected has judged and exceeded, 0 of initial value is set to Counter n in step 509.

[0090] In step 510, the existence of the directions to end is judged, and return and the above processing are repeated to step 502 until there are termination directions. The same table for retrieval as (a) of drawing 4 is generated as a result of the above processing. Moreover, it is also possible to add the processing whose music under playback changes significance into a carrier beam case for effect by the control unit like steps 208 and 209 (drawing 2).

[0091] Moreover, it is also possible to determine the keyword given to music according to environments, such as the weather. For example, a thermo sensor and a

humidity sensor are used for a detecting element 140, these sensors are installed in the interior of an automobile, and the signal from these sensors is acquired as digital data through the A/D-conversion section 111 with a predetermined time interval. Using the acquired data, the discomfort index DI (%) can be calculated by the formula 1, and the corresponding keyword can be determined with reference to the candidate table beforehand prepared using the result.

$DI = 0.81T + 0.01U(0.99T - 14.3) + 46.3$... (formula 1)

Here, T is atmospheric temperature (degree C) and U is humidity (%).

[0092] (d) of drawing 3 is an example of the candidate table to which the discomfort index and a keyword were made to correspond. As an index, it is also possible to use the combination of the numeric value of atmospheric temperature and humidity.

[0093] Furthermore, it is also possible to determine the corresponding keyword with reference to the candidate table which added the atmospheric-pressure sensor to the thermo sensor and the humidity sensor, and was beforehand prepared to the combination of these three kinds of sensors.

[0094] Moreover, it is also possible to add to music by making entrainment manpower into a keyword. In that case, a weight sensor is used for a detecting element 140, and it embeds into a seat, and the entrainment manpower detected by the weight sensor is made to correspond with the music specific information under playback, and is recorded on the tables for retrieval. For example, when there are the music and fellow passenger who are fond and hear it when the operator has got on by one person, information, such as music liked and listened to, can be reflected in the table for retrieval. As for entrainment manpower, two or more registration also of the same music also being reproduced when entrainment manpower differs may be carried out from a certain thing.

[0095] Moreover, a user is able to enable it to choose the keyword to each music from a control unit 104 from a direct input or a candidate. For example, after specifying the music which expects that music specific information is acquired from the TOC information which was read from CD and recorded on the Records Department 103, and a list table example and a user give a keyword to a display (not shown) as an alphabetic character, it is able to enable it to choose a keyword from the keyword candidate lists which are inputted as an alphabetic character and which input with voice or the display was shown.

[0096] Moreover, it is also possible to determine the keyword given to music according to the condition of an operator, such as to have held sleepiness. For example, a CCD camera is used for a detecting element 140, an operator's face is photoed, and it acquires with digital image data through A/D converter 111, and records on memory 102 with a predetermined time interval. It judges whether the operator has held sleepiness by performing an image processing to the recorded image data, detecting an operator's eyes, and analyzing extent of closing motion of an

eye, the time amount change pattern of closing motion, etc. When it is judged that sleepiness is held, since an operator is considered that sleepiness was held by the music under playback, or there is no effectiveness of awaking sleepiness from the condition of having held in the music under playback about an operator, he makes the music specific information and the keyword "the sleepiness" under playback correspond, and records on the table for retrieval of the Records Department 103.

[0097] Moreover, it is also possible to generate the table for retrieval combining two or more above-mentioned keyword decision processings. (b) of drawing 4 is the present days and months, current time, a travel speed, a perimeter environment, an operator's wakefulness, and an example of the table for retrieval generated using entrainment manpower.

[0098] Although the case where one table for retrieval was recorded above at the Records Department 103 was explained, it is also possible to divide and record on two or more tables for retrieval. That is, after specifying the table for retrieval which records a keyword out of two or more tables for retrieval which added identification information, it is possible to play CD130. In that case, the keyword and music specific information which were determined by the above-mentioned processing are recorded only on the specified table for retrieval.

[0099] Moreover, it is also possible to adopt recording apparatus (not shown), such as dismountable semiconductor memory, and to record the table for retrieval on the recording apparatus.

[0100] Drawing 6 is the block diagram showing the outline of the information offer equipment concerning the gestalt of operation of the 2nd of this invention.

[0101] information offer equipment 600 -- CPU101, memory 102, the Records Department 103, a control unit 104, and a time check -- it is constituted including a means 105, the CD drive 106, the digital processing section 107, the D/A converter 108, amplifier 109, a bus 110, a loudspeaker 120, CD130, CD-ROM drive 601, video memory (it is described as "VRAM" below) 602, the video signal generation section 603, the GPS signal receive section 604, and CD-ROM610. The GPS signal receive section 604 is connected to the GPS antenna 620, and the video signal generation section 603 is connected to the display 630.

[0102] Information offer equipment 600 is equipped with the means for realizing a car navigation function instead of the A/D-conversion section 111 in the voice regenerative apparatus 100 shown in drawing 1. In drawing 6, the same number is given to the same component as drawing 1, and the voice currently recorded on CD is reproduced by achieving the function as the voice regenerative apparatus 100 that these components are the same.

[0103] By setting to CD-ROM drive 601 CD-ROM610 on which map information and related information were recorded, CPU101 reads map information and related information information, and displays on a display 630. Read-out of the map data

currently recorded on CD-ROM610 is performed when CPU101 controls CD-ROM drive 601. CD-ROM drive 601 rotates CD-ROM610, and transmits digital map data to memory 102 by the optical pickup (not shown). Next, two-dimensional map image data is generated from the map data recorded on memory 102, and it records on VRAM602. When the video signal generation section 603 reads each pixel data of map image data from VRAM602, changes into an analog video signal and transmits to a display 630, a map and related information are displayed.

[0104] moreover, the GPS signal containing the submission time which CPU101 is a predetermined time interval and is transmitted from two or more satellites through the GPS antenna 620 and the GPS signal receive section 604 -- receiving -- an internal time check -- distance with each satellite is calculated from time difference with a means 105. The map which superimposed the graphic form which expresses the current position to a display 630 is displayed by calculating the position coordinate of a current automobile using this calculated distance and the positional information of the satellite obtained from orbital count of a satellite, and writing the predetermined graphic data showing the current position in the location where the map image data on VRAM602 corresponds.

[0105] Information offer equipment 600 has the function to set up the destination, like usual car navigation equipment by choosing one from the candidate lists of locations which classify beforehand and are recorded. For example, the table which is beforehand recorded on CD-ROM610 and to which Oita and a minor key as shown in drawing 7 , the name, the address, and the position coordinate were made to correspond is used, CPU101 displays a candidate on a display 630 hierarchical, and the destination is determined when a user chooses one from the inside. CPU101 records the information about the determined destination on the Records Department 103, and displays the predetermined graphic form showing the destination on the location on the map applicable to the target position coordinate.

[0106] Drawing 8 is the flow chart of the processing which CPU101 performs in the processing which determines a keyword from the destination where information offer equipment 600 was set up.

[0107] Hereafter, the processing which determines a keyword from the destination based on the flow chart of drawing 8 is explained. The destination is set up beforehand and it is assumed that related information is recorded on the Records Department 103.

[0108] In steps 801 and 802, the same processing as steps 201 and 202 of drawing 2 is performed.

[0109] In step 803, the information about the destination by which current setting out is carried out from the Records Department 103 is acquired. For example, when the ABC skiing area is set up as a destination out of the candidate of drawing 7 , a "skiing area" is acquired as text data of a minor key.

[0110] When it shifts to step 805 when the text data acquired in step 804 judges

whether it is contained in the candidate table set up beforehand and judges that it is contained, and it judges that it is not contained, it shifts to step 806.

[0111] In step 805, the corresponding keyword is determined with reference to a candidate table. For example, in the case of the candidate table shown in (e) of drawing 3, "skiing" is determined as a keyword. Like step 206 (drawing 2), the determined keyword makes the music specific information and significance under playback correspond, and is recorded on the table for retrieval of the Records Department 103.

[0112] Since the processing in step 806 – step 809 is the same as the processing in steps 207–210 of drawing 2, the explanation is omitted here.

[0113] The table for retrieval on which the keyword corresponding to the destination was recorded will be generated to the music reproduced by the above processing by the time it arrived at the destination.

[0114] Moreover, it is also possible to determine a keyword according to the current position of an automobile. In this case, a map is beforehand divided into two or more blocks of predetermined magnitude, the candidate table to which the block number given to each block and the keyword were made to correspond is created, and it records on the Records Department 103.

[0115] CPU101 acquires the keyword corresponding to the block number which calculated the current position (for example, LAT and LONG), determined the block number of the block with which this current position is included, and was determined with reference to the candidate table from the signal acquired through the GPS antenna 620 and the GPS signal receive section 604, is made to correspond with music specific information while reproducing this acquired keyword, and significance, and is recorded on the table for retrieval. When the location under transit of an automobile is located in the block near the seashore by using the candidate table which the "marine" keyword was made to correspond and recorded it on two or more blocks for example, near the seashore by this, the music specific information which specifies the music under playback, a keyword "the sea", and significance can be matched, and it can record on the table for retrieval.

[0116] Next, in the voice regenerative apparatus 100 (drawing 1) concerning the gestalt of operation of the 1st of this invention, the processing which determines the music reproduced using the table for retrieval is explained. It is assumed that the table for retrieval (for example, (b) of drawing 4) is recorded on the Records Department 103.

[0117] Drawing 9 is a flow chart which shows the processing to which CPU101 carries out the music reproduced using a keyword in the processing for which it opts automatically.

[0118] In step 901, as described above, after acquiring the information on the wakefulness of current days and months, current time, a travel speed, atmospheric

temperature, humidity, entrainment manpower, and an operator, the keyword corresponding to each is determined.

[0119] In step 902, the music specific information (MCN and track number) in which the keyword "sleepiness" is not contained is acquired out of the table for retrieval, including all the keywords determined to each of current days and months, current time, a travel speed, atmospheric temperature, humidity, and entrainment manpower.

[0120] In step 903, the number (k) of the acquired music specific information is judged, and it branches according to the result of decision. If it is $k=0$, it will shift to step 905, if it is $k=1$, it will shift to step 907, and if it is $k \geq 2$, it will shift to step 906.

[0121] In step 904, after reducing one keyword, it shifts to step 904. To this cutback processing, various kinds of processings are possible. For example, the sequence of a cutback is beforehand specified as the keyword of the candidate table reduced to arbitration, and deleting in the sequence corresponding to this etc. is possible.

[0122] When it ends when it judges whether the keyword remains by processing of step 904 and it is judged in step 905 that it does not remain, and it is judged that it remains, after returning to step 902, the table for retrieval is searched using the keyword whose number became less than last time.

[0123] In step 906, one music specific information is chosen in consideration of significance from two or more music specific information. To this selection processing, various kinds of processings are possible. For example, the value adding all the significance corresponding to each music specific information which chooses music specific information including the largest significance is compared, and it is possible to choose the music specific information corresponding to the largest value etc. Moreover, it is also possible to choose music specific information in consideration of the priority beforehand given to each keyword. In this case, the keyword used for retrieval will compare the priority of the keyword which was not used for the retrieval in the keyword corresponding to the selected music specific information from supporting all the selected music specific information. Moreover, when the text (for example, MCN of music, a track number) corresponding to the selected music specific information is shown in a display (not shown) a list table and a user chooses from lists, music specific information is able to be determined.

[0124] In step 907, playback of the music currently recorded on CD130 corresponding to the determined music specific information is started.

[0125] The processing in steps 908-911 is the same as the processing in steps 207-210 of drawing 2. That is, when a control unit is operated and actuation of a skip, a rapid traverse, etc. is made to the music under playback, only 1 decreases the significance of the music specific information corresponding to the music under playback of the table for retrieval.

[0126] The keyword automatically determined according to a current situation is used, and the music which should be reproduced will be automatically determined by the

above and will be reproduced.

[0127] Also in the information offer equipment 600 (drawing 6) concerning the gestalt of operation of the 2nd of this invention, it is possible to use a keyword similarly and to determine the music to reproduce automatically. That is, as described above, the music to reproduce can be determined by determining a keyword automatically using a destination, the current position, etc. which are set up, and acquiring the music specific information corresponding to the keyword with reference to the table for retrieval.

[0128] Although it explained that the group of {MCN and a track number} could be used above as an example of music specific information, CD of two or more sheets may be sold as 1 set, and all MCN(s) of CD of two or more of these sheets are sometimes the same in that case. In that case, in the group of {MCN and a track number}, since music cannot be specified, information, such as start time of each music in TOC and performance time amount, is further used for music specific information. For example, the group of {MCN, a track number and start time}, or {MCN, a track number and performance time amount} can be used as music specific information.

[0129] Moreover, in the gestalt of the 1st operation shown in drawing 1 , the reading rate of data uses a drive quicker than acoustic reproduction speed for the CD drive 106. Use a large hard disk for the Records Department 103, and the buffer of a large capacity is had and constituted from a capacity required for the usual sound reproduction in the digital processing section 107. It is possible to record sound data and TOC data on the Records Department 103, reading the sound data in the data (sound data and TOC data) read from CD at high speed from a buffer at the rate suitable for sound reproduction, and reproducing. In the voice regenerative apparatus of this configuration, it is also possible to perform processing which determines automatically the keyword explained above. In this case, it becomes possible to make the keyword determined as each music correspond directly, without using TOC information as music specific information by recording on the Records Department 103 as a file which attached the file name which does not overlap the sound data of each music, and using this file name as music specific information. As opposed to the ability not to specify music in the music specific information which combined TOC information, since CD in which all MCN(s) of CD of two or more sheets sold as 1 set have neither the case of being the same, nor MCN also exists as described above By using the file name of each music recorded on the Records Department 103 as music specific information, it becomes possible to specify music as accuracy.

[0130] Moreover, it is also possible to have and constitute the serial interface for connecting with a cellular phone the voice regenerative apparatus 100 shown in drawing 1 . in that case, the additional information (a title --) about the server connected to the Internet by connecting a cellular phone to music Download

explanation of music, a singer, a songwriter, a composer, a sale day, etc., make it correspond with music specific information, and it records on the Records Department 103. When there is music which searches additional information using the keyword by which an automatic decision was made as described above, and agrees in a keyword, it is possible to reproduce the music.

[0131] Moreover, it is possible to use the sale day of the music acquired from the server in this case, and to acquire the keyword which corresponds from a candidate table (for example, (a) of drawing 3). Moreover, in step 907 (drawing 9) in the processing which determines the music to reproduce, the title corresponding to each music specific information, a singer, etc. are shown a list table as an approach of choosing one music specific information from two or more music specific information, and it also becomes possible to receive a user's selection.

[0132] Moreover, it is also possible to use the recorded time, to perform the same processing as steps 203-206 of drawing 2 , to make it correspond with the music specific information which specifies the music which determined and downloaded the keyword, and to record on the table for retrieval, when downloading the music data wished to have and recording on the Records Department 103 from the server connected to the Internet through a cellular phone.

[0133] Although the case where CD of one sheet was used above was explained, it is also possible to use the drive which has the autochanger which can carry CD of two or more sheets. Moreover, although CD and CD-ROM were indicated, it is also possible for this invention not to be limited to these and to apply to DVD, MD, and other dismountable record media.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the outline configuration of the voice regenerative apparatus concerning the gestalt of operation of the 1st of this invention.

[Drawing 2] It is the flow chart which shows the processing which determines a keyword using current time.

[Drawing 3] (a) - (e) is the table showing the example of the candidate table for determining a keyword.

[Drawing 4] (a) And (b) is the table showing the example of the table for retrieval.

[Drawing 5] It is the flow chart which shows the processing which determines a keyword according to a travel speed.

[Drawing 6] It is the block diagram showing the outline configuration of the information offer equipment concerning the gestalt of operation of the 2nd of this invention.

[Drawing 7] It is the table showing the candidate of the destination for car navigation.

[Drawing 8] It is the flow chart which shows the processing which determines a keyword using the destination.

[Drawing 9] It is the flow chart which shows the processing which determines the music reproduced using a keyword.

[Description of Notations]

100 Voice Regenerative Apparatus

101 Arithmetic and Program Control (CPU)

102 Memory

103 Records Department

104 Control Unit

105 Time Check -- Means

106 CD Drive

107 Digital Processing Section

108 D/A Converter

109 Amplifier

110 Bus

111 A/D-Conversion Section

120 Loudspeaker

130 CD

140 Detecting Element

600 Information Offer Equipment

601 CD-ROM Drive

602 Video Memory (VRAM)

603 Video Signal Generation Section

604 GPS Signal Receive Section

610 CD-ROM

620 GPS Antenna

630 Display